

REMARKS

Claims 92-110 are pending in this application. Claim 101 has been written in independent form, to include all limitations of independent claim 100, and is now in condition for allowance together with claim 102. Claim 100 has been amended. No new matter has been introduced. Applicants acknowledge with appreciation the allowance of claims 92-99 and 107-110.

Claims 100 and 103-106 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dalman (U.S. Patent No. 4,575,700) ("Dalman") in view of Tran (U.S. Patent No. 6,259,407) ("Tran"). This rejection is respectfully traversed.

The claimed invention relates to a processor system having low loss coplanar waveguides. As such, independent claim 100 recites a "processor system" comprising *inter alia* "a processor," "an integrated circuit coupled to said processor, at least one of said integrated circuit and processor comprising a substrate" and "a signal conductor line formed over said substrate." Amended independent claim 100 also recites that the signal conductor line comprises "a copper layer . . . over a first insulating layer on said substrate, and wherein said first insulating layer is at least partially between said copper layer and a top surface of said substrate, and an oxide layer over said copper layer." Independent claim 100 further recites "at least two longitudinal ground conductor planes formed over said substrate and on both sides of said signal conductor line and spaced apart from said signal conductor line to form respective gaps, and at least two trenches formed in said substrate at said respective gaps."

Dalman relates to "very small low loss transmission lines that can be easily incorporated as a solid state integrated circuit element." (Col. 1, lines 9-11). Dalman teaches that a "substrate is provided with at least one slot" and that "[a] thin

metalization coating is applied onto the top surface of the substrate with the metalization coating extending into the slot along opposed sides thereof.” (Col. 1, lines 34-36). Dalman further teaches that “[a] low loss dielectric material of a second given permittivity at least partially fills the slot and spans between the metal coatings on the slot sidewalls.” (Col. 1, lines 36-42).

Tran relates to a “uniplanar dual strip antenna that has a two dimensional structure.” (Abstract). Tran teaches that “[t]he antenna is comprised of a first and a second metallic strip, each printed or etched on a thin planar substrate” and that “[t]he first and second strips are separated by a predetermined gap and are used as conductors of a two-wire transmission line.” (Abstract). Tran also teaches that “[a] coplanar waveguide is coupled to the uniplanar dual strip antenna” and that “[t]he coplanar waveguide is constructed by printing or etching metal on the substrate.” (Abstract).

The subject matter of claims 100 and 103-106 would not have been obvious over Dalman in view of Tran. Specifically, the Office Action fails to establish a *prima facie* case of obviousness. Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. See e.g., In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999); In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998); Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996).

In the present case, Dalman and Tran, whether considered alone or in combination, do not disclose, teach or suggest all limitations of independent claim 100.

Dalman does not teach or suggest a “processor system,” much less a “processor system” comprising “a signal conductor line” that “comprises a copper layer, said copper layer being over a first insulating layer on said substrate, and wherein said first insulating layer is at least partially between said copper layer and a top surface of said substrate,” as recited in amended independent claim 100. Dalman teaches that the “substrate 12 is metalized as at 26 in the form of a thin Al, Au, Ag, etc., layer on the exposed surface of layer 12a” (col. 2, lines 36-38; FIG. 1), and not that the signal conductor line comprises “a copper layer,” as in the claimed invention. Dalman also fails to teach or suggest “a signal conductor line” comprising “a copper layer . . . over a first insulating layer . . . and *an oxide layer over said copper layer*,” as amended independent claim 100 recites (emphasis added).

Similarly, Tran is silent about a “processor system,” much less about a “processor system” comprising “a signal conductor line” having all the characteristics recited in claim 100. Tran relates to a uniplanar dual strip antenna having a two-dimensional structure, and not to a processor system, or to an integrated circuit coupled to a processor, much less to an integrated circuit coupled to a processor wherein at least one of the integrated circuit and the processor comprises a signal conductor line having all the characteristics of amended independent claim 100.

Applicants also submit that a person of ordinary skill in the art would not have been motivated to combine Dalman and Tran to arrive at the claimed invention. To establish a *prima facie* case of obviousness, “[i]t is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor.” Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990). This way, “the inquiry is not whether each element

existed in the prior art, but whether the prior art made obvious the invention as a whole for which patentability is claimed.” Hartness Int’l, Inc. v. Simplimatic Engineering Co., 819 F.2d 1100, 1108 (Fed. Cir. 1987). Accordingly, a determination of obviousness “must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist.” Pro-Mold & Tool Co., 75 F.3d at 1573. This way, a rejection of a claim for obviousness in view of a combination of prior art references must be based on a showing of a suggestion, teaching, or motivation that has to be “clear and particular.” In re Dembiczak, 175 F.3d at 999. Thus, the mere fact that it is possible to find two isolated disclosures which might be combined to produce a new compound does not necessarily render such production obvious, unless the prior art also suggests the desirability of the proposed combination.

The February 9, 2005 Office Action fails to establish a *prima facie* case of obviousness because, as the Court in Northern Telecom, Inc. noted, “[i]t is insufficient that the prior art disclosed the components of the patented device” and there is no “teaching, suggestion, or incentive to make the combination.” Northern Telecom, Inc., 908 F.2d at 934. On one hand, the crux of Dalman is a method of providing parallel plate and slot-line transmission line structures that can be incorporated as solid state circuits. (Col. 1, lines 23-29). For this, Dalman teaches a simplified method of forming combined parallel plate and slot-line transmission lines by “etching or ion milling at least one groove within one surface of the substrate,” “effecting continued vaporization or sputter deposition of [a] thin metal coating obliquely onto said surface” and “applying a low loss dielectric material . . . to the metalized substrate.” (Col. 1, lines 51-68).

On the other hand, the crux of Tran is “a new antenna structure and technique for manufacturing antennas . . . to achieve bandwidths more commensurate

with advanced communication system demands." (Col. 2, lines 57-60). Tran emphasizes that "the antenna structure should be conducive to internal mounting to provide more flexible component positioning within the wireless device, greatly improved aesthetics, and decreased antenna damage." (Col. 2, lines 60-63). Accordingly, the only structure that Dalman and Tran have in common is the substrate on which each of their elements are formed. Thus, a person of ordinary skill in the art would not have been motivated to combine these two disparate references, and withdrawal of the rejections of claims 100 and 103-106 is respectfully requested.

Allowance of all pending claims is solicited.

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